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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,511	08/27/2001	Meng-Huang Liu	3626-0219P	1034

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EXAMINER

BENENSON, BORIS

ART UNIT PAPER NUMBER

2836

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/938,511

Applicant(s)

LIU ET AL.

Examiner

Boris Benenson

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2836

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1. Claim 1 rejected under 35 U.S.C. 102(a) as being anticipated by Chang et al. (6,469,560). Chang et al. disclose an electrostatic discharge protective circuit comprising a resistive device (Fig.4, Pos. R1) that has one end connected to power supply (Vcc), a capacitor device (C1), which is connected in series between the resistor device and ground and a PMOS device (P2). PMOS comprises a gate electrode, a first electrode, a second electrode and a bulk electrode. The gate electrode is connected between the resistor device and the capacitor device, the bulk electrode is interconnected to the first electrode and the first electrode is connected to the power supply.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3,5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (6,469,560). Chang et al.

Art Unit: 2836

disclose an electrostatic discharge protective circuit comprising a resistive device (Fig.4, Pos. R1) that has one end connected to power supply (Vcc), a capacitor device (C1), which is connected in series between the resistor device and ground and a PMOS device (P2). PMOS comprises a gate electrode, a first electrode, a second electrode and a bulk electrode. The gate electrode is connected between the resistor device and the capacitor device, the bulk electrode is interconnected to the first electrode and the first electrode is connected to the power supply. Chang et al. didn't disclose protection circuit for protection a mixed-voltage integrated circuit, where some part of the mixed-voltage integrated circuit is powered by different power sources (Vcc1, Vcc2...). It would have been obvious to one having ordinary skill in the art at the time the invention was made to connect the protection circuits, disclosed by Chang et al., to each of power sources and connect the second electrode of the protection circuits to common potential (Vss) read on common bus, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8.

Referring to Claims 5 and 6, voltage level of multiple power supplies does not change basic design of the circuitry. It would

Art Unit: 2836

have been an obvious matter of design choice to use circuitry with core logic operating on power level different then power level of input/output circuitry, since applicant has not disclosed that use of protective circuit for equal or not equal voltages solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with multiple power supplies of equal or not equal voltages.

Referring to Claim 7, it is well known that the potential (V_{ss}), which is usually grounded, should have a very low resistance and therefore it is well known in the art use of ground buses.

3. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (6,469,560) in view of Mentzer (5,535,086). Chang et al. disclose an electrostatic discharge protective circuit comprising a resistive device (Fig.4, Pos. R1) that has one end connected to power supply (V_{cc}) and a capacitor device (C1), connected on one end to the resistive device and to the ground on the other end. Chang et al. didn't disclose parameters of the RC circuit (R1, C1). Mentzer teaches that "the RC time constant circuit of the ESD protection circuit is typically constructed with a time constant in microseconds (μS) or greater so that the RC time constant circuit cannot track the

Art Unit: 2836

rise time of ESD events, which are typically in nanoseconds (nS) (Col.3, Lines 32-36). It would have been obvious to one of ordinary skill in the art at the time the invention to implement Mentzer's teachings when calculate parameters of the RC circuit of Chang et al., because it will allow to block ESD event.

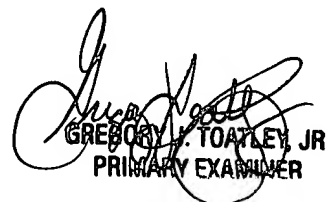
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris Benenson whose telephone number is (703) 305-6917. The examiner can normally be reached on M-F (8:20-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Boris Benenson
Examiner
Art Unit 2836


GREGORY L. TOOLEY, JR.
PRIMARY EXAMINER

Application/Control Number: 09/938,511

Page 6

Art Unit: 2836

B.B.

July 23, 2003